

Natural Resource Technology, Inc.



September 16, 1999 (1105)

D.N.R. SED Hqtrs. Milwaukee, WI

Mr. Mike Zillmer Solid Waste Section WDNR - Southeast District 4041 N. Richards Street, P.O. Box 12436 Milwaukee, Wisconsin 53212

RE: Operation, Maintenance and Monitoring Status Report No. 12 Reporting Period – January 1, 1999 to June 30, 1999 Praefke Brake and Supply, 133 Oak Street, West Bend, Wisconsin FID #267083740, 267004430

Dear Mr. Zillmer:

On behalf of Praefke Brake and Supply (Praefke), Natural Resource Technology, Inc. (NRT) has prepared this Operation, Maintenance and Monitoring (OM&M) Status Report for the two groundwater remediation systems at the above-referenced site. Two copies of the report are enclosed for your review. This report was prepared using appropriate pages from Form 4400-194 and summarizes OM&M activities for the period January 1, 1999 to June 30, 1999. The related attachments to the form are listed below.

As a reminder, this site has two groundwater pump and treat systems. System 001 is the VOC remediation system on the north side of the property, shutdown as of October 30, 1998 with WDNR approval. Because of the low level stable concentrations in the System 001 wells, we recommend that the groundwater sampling frequency be reduced to semi-annually in 2000 for these wells, with possible future reduction to annually assuming continued favorable results. System 002 is the PCP remediation system on the south side of the property. Please contact us if you have any questions or comments regarding the status report.

Sincerely,

NATURAL RESOURCE TECHNOLOGY, INC.

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Julie A. Zimdars, P.E. Environmental Engineer

Laurie J. Parsons, P.E. Senior Engineer

Mr. Mike Zillmer September 16, 1999 Page 2

Attachments: Completed Form 4400-194 (System 001 and System 002) and Explanations Figure 1 - Site Location Map
Figure 2 - Site Plan with Groundwater Contour Map
Figure 3 - Groundwater Contaminant Distribution Map
Table 1 - Groundwater Analytical Summary - VOCs
Table 2 - Groundwater Analytical Summary - SVOCs
Table 3 - Groundwater Elevation Data
Sampling Schedule
Cumulative Contaminant Removal Graphs (System 001 and 002)
Contaminant Concentration vs. Time Graphs - System 001
Contaminant Concentration vs. Time Graphs - System 002
WDNR Discharge Monitoring Report Forms - first and second quarter 1999

cc: Mr. Mike Butz, Praefke Brake and Supply

- Ms. Jennifer Buzecky, Whyte, Hirschboeck, Dudek S.C.
- Mr. Craig Caliendo, Whyte, Hirschboeck, Dudek S.C.
- Mr. Frank Volage, EIS Brake Parts, Div. of Standard Motor Products

[1105/1105 zillmer 99.9.02.ltr]





COMPLETED FORM 4400-194 (SYSTEM 001 AND SYSTEM 002) AND EXPLANATIONS

State of Wisconsin Department of Natural Resources

OPERATION, MAINTENANCE, MONITORING AND OPTIMIZATION REPORTING OF SOIL AND GROUNDWATER REMEDIATION SYSTEMS

PURPOSE AND APPLICABILITY OF THIS FORM: Completion of this form is required under s. NR 724.13(e), Wis. Adm. Code. Use of this form s mandatory. Failure to submit this form as require is a violation of s. NR 724.13, Wis. Adm. Code, and is subject to the penalties in s. 144.99, Wis. Stats. This form must be submitted every six months for active soil and groundwater remediation projects and every twelve months for passive (natural attenuation) remediation projects that are regulated under the NR 700 series of Wis. Adm. Code. Specifically, for sites meeting any of the following criteria:

- Soil or groundwater remediation projects that report progress in accordance with s. NR 700.11(1), Wis. Adm. Code.
- Soil or groundwater remediation projects that report progress in accordance with s. NR 724.13(3), Wis. Adm. Code. (Note: s. NR 724.13(3) requires progress reports for operation and maintenance of active systems to be submitted every three months however the Department considers submittal of this form every six months to satisfy the requirements of the rules, unless otherwise directed by the Department on a site specific basis.)
- Soil or groundwater remediation projects that report progress in accordance with s. NR 724.17(3), Wis. Adm. Code. (Note: s. NR 724.17(3) requires progress reports every time that samples are collected however the Department considers submittal of this form every twelve months to satisfy the requirements of the rules for monitoring natural attenuation, unless otherwise directed by the Department on a site specific basis.)

Submittal of this form is not a substitute for reporting required by Department programs such as Wastewater or Air Management. Personally dentifiable information on this form is not intended to be used for any other purpose than tracking progress of the remediation by the Bureau for Remediation and Redevelopment.

Please refer to the instructions that are attached to the back of these forms starting on page INS-1. In all cases, when asked to "explain," those explanations are to be included on separate sheets of paper. Explanations must include a title that refers to the page and item number, for example: Page GI-2, C.1.a.

	1. Site name: Praefke Brake and Supply Corporation (Sy	stem 001-VOC)	
:	2. Reporting period from:	To: <u>6/30/99</u>	Days in period:181
:	3. Regulatory agency (enter DNR, DCOM, DATCP and/or othe	r): <u>WDNR</u>	
	4. DNR issued site number:Case # 02-67-152445_FI	D# 267083740_267004430	
	5. State reimbursement fund claim number and fund name (if n	ot applicable, enter NA):NA	• • • • • • • • • • • • • • • • • • • •
(Site location: a. DNR region and county: <u>Southeast Region</u> Washir 	ngton County	
	b. Street address and municipality: <u>133 Oak Street</u> ,	West Bend	
	c. Township, range, section and quarter quarter section:	T11NR19E, S13 SW ½ of SW ½	· · · · · · · · · · · · · · · · · · ·
7	7. Responsible party: a. Name:Praefke Brake & Supply Corpora	tion	
	b. Mailing address: <u>133 Oak Street</u>		
	West Bend, WL 53095		
	c. Phone number: <u>(414) 334-2355 Mr. Mike Butz</u>		· · · · · · · · · · · · · · · · · · ·
1	8. Consultant: a. Company name: <u>Natural Resource Technology. In</u>		
	b. Mailing address: <u>23713 West Paul Road</u>		·····
	Pewaukee, WL 53702		
	c. Phone number:(414) 523-9000_Ms_Laurie_L_Pa	rsons_Ms_Julie A_Zimdars	·
	9. Contaminants:Chlorinated volatile organic comp	oounds (Trichloroethene, 1, 1, 1 - Trichloroeth	nane_etc.) & Methyl tert hutyl ethe
	10. Soil types (USCS or USDA):SM/SP_interbedded CL_s	ome GP (to 35'), CL (to 50')	
	11. Hydraulic conductivity (cm/sec): <u>3.90 x 10⁴ geom_mean</u> slug tests (Range 1.95 x 10 ⁴ to 4.60	 12. Average linear velocity of grounds x 10⁴ cm/s) 	water (fl/yr): 21.5

OPERATION, MAINTENANCE, MONITORING AND OPTIMIZATION REPORTING OF SOIL AND GROUNDWATER REMEDIATION SYSTEMS

GENERAL SITE INFORMATION, CONTINUED
SITE NAME AND REPORTING PERIOD:
Site name:Praefke Brake and Supply Corporation (System 001-VOC)
Reporting period from: 1/1/99 To: 6/30/99 Days in period: 181
A. GENERAL INFORMATION (CONTINUED):
13. If soil is treated ex situ, is the treatment location off site? (Y/N) If yes, give location:
a. DNR region and county:
b. Township, range, section and quarter quarter section:
B. REMEDIATION METHOD: Only submit pages that apply to an individual site. Check all that apply:
X Groundwater extraction (submit a completed page GW-1). Free product recovery (submit a completed page GW-1). In situ air sparging (submit a completed page GW-2). Groundwater natural attenuation (submit a completed page GW-3). Other groundwater remediation method (submit a completed page GW-4). Soil venting (including soil vapor extraction and bioventing, submit a completed page IS-1). Soil natural attenuation (submit a completed page IS-2). Other in situ soil remediation method (submit a completed page IS-3). Biopiles (submit a completed page ES-1). Landspreading/thinspreading of petroleum contaminated soil (submit a completed page ES-3). Other ex situ soil remediation method (submit a completed page ES-3).
 C. GENERAL EFFECTIVENESS EVALUATION FOR ALL ACTIVE SYSTEMS: If the remediation is active (not natural attenuation), complete this subsection. 1. Is the system operating at design rates and specifications? (Y/N): <u>No. system shutdown 10/30/98</u>. If the answer is no, explain whether or not modifications are necessary to achieve the goal that was previously established in design.
2. Are modifications to the system warranted to improve effectiveness? (Y/N) If yes, explain:No
3. Is natural attenuation an effective low cost option at this time? (Y/N): Yes see attached
4. Is closure sampling warranted at this time? (Y/N): Yes, see attached
5. Are there any modifications that can be made to the remediation to improve cost effectiveness? (Y/N) If yes, explain:
D. ECONOMIC AND COST DATA TO DATE: 1. Total investigation costs (\$): <u>Not Available, performed by previous owner</u>
2. Implementation costs (design, capital and installation costs, excluding investigation costs) (\$): Not available. see above
3. Total costs during the previous reporting period (\$): Praefke Brake is performing Operation and Maintenance
4. Total costs during this reporting period (\$): Praefke Brake is performing Operation and Maintenance
5. Total anticipated costs for the next reporting period (\$): See closeout / natural attenuation sampling
6. Are any unusual or one-time costs listed in the reporting periods covered by D.3., D.4. or D.5. above? (Y/N) If yes explain:
7. If close out is anticipated within 12 months, estimated costs for project closeout (\$): \$20,000 - \$30,000

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OPERATION, MAINTENANCE, MONITORING AND OPTIMIZATION REPORTING OF SOIL AND GROUNDWATER REMEDIATION SYSTEMS

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	GENERAL SHE INFORMATION, CONTINUED
TE NAME AND REPORTING PERIOD:	
Site name: Praefke Brake (System (001-VOC)
Reporting period from:	To: To: Days in period:181
NAME(S), SIGNATURE(S) AND DATE (bmit reports under ch. NR 712 Wis. Adm. C	OF PERSON(S) SUBMITTING FORM: Legibly print name, date and sign. Only persons qualified t Code are to sign this form.
egistered Professional Engineers:	
I (print name) Laurie J. Parsons Wisconsin, registered in accordance with with the rules of Professional Conduct ir document is correct and the document w	s, Julie A. Zimdars, hereby certify that I am a registered professional engineer in the State of the requirements of ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this as prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.
Signature, title, P.E. number and date:	Andurthe 2-dime Env. Ensineer #31,452, 5/11/95
des es a la stata.	Kaurie J. Parsons, Sr. Engineer, # E 27312, 7/16/9
drogeologists:	
I (print name)	, hereby certify that I am a hydrogeologist as that term is defined in s
	<u> </u>
cientists:	
ientists: I (print name) Wis. Adm. Code, and that, to the best of	, hereby certify that I am a scientist as that term is defined in s. NR 712.03(3) my knowledge, all information contained in this document is correct and the document was prepared in
ientists: I (print name) Wis. Adm. Code, and that, to the best of compliance with all applicable requiremen	, hereby certify that I am a scientist as that term is defined in s. NR 712.03(3) my knowledge, all information contained in this document is correct and the document was prepared in nts in chs. NR 700 to 726, Wis. Adm. Code.
cientists: I (print name) Wis. Adm. Code, and that, to the best of compliance with all applicable requirement Signature, title and date:	, hereby certify that I am a scientist as that term is defined in s. NR 712.03(3) my knowledge, all information contained in this document is correct and the document was prepared in nts in chs. NR 700 to 726, Wis. Adm. Code.
cientists: I (print name) Wis. Adm. Code, and that, to the best of compliance with all applicable requirement Signature, title and date: rofessional Seal(s), if applicable:	, hereby certify that I am a scientist as that term is defined in s. NR 712.03(3) my knowledge, all information contained in this document is correct and the document was prepared in nts in chs. NR 700 to 726, Wis. Adm. Code.
cientists: I (print name) Wis. Adm. Code, and that, to the best of compliance with all applicable requirement Signature, title and date: rofessional Seal(s), if applicable:	, hereby certify that I am a scientist as that term is defined in s. NR 712.03(3) my knowledge, all information contained in this document is correct and the document was prepared in nts in chs. NR 700 to 726, Wis. Adm. Code.
cientists: I (print name) Wis. Adm. Code, and that, to the best of compliance with all applicable requirement Signature, title and date: ofessional Seal(s), if applicable:	, hereby certify that I am a scientist as that term is defined in s. NR 712.03(3) my knowledge, all information contained in this document is correct and the document was prepared in nts in chs. NR 700 to 726, Wis. Adm. Code.
cientists: I (print name) Wis. Adm. Code, and that, to the best of compliance with all applicable requirement Signature, title and date: rofessional Seal(s), if applicable: ULLE A. ZIMDARS E-31,452 GERMANTOWN WI	, hereby certify that I am a scientist as that term is defined in s. NR 712.03(3) my knowledge, all information contained in this document is correct and the document was prepared in nts in chs. NR 700 to 726, Wis. Adm. Code.

GROUNDWATER PUMP AND TREAT SYSTEMS AND FREE PRODUCT RECOVERY SYSTEMS
SITE NAME AND REPORTING PERIOD:
Site name:Praefke Brake (System 001-VOC)
Reporting period from: <u>1/1/99</u> To: <u>6/30/99</u> Days in period: <u>181</u>
Date that the system was first started up: <u>12/6/95</u>
A. GROUNDWATER EXTRACTION SYSTEM OPERATION: 1. Total number of groundwater extraction wells or trenches available and the number in use during period:
2. Number of days of operation (only list the number of days the system actually operated, if unknown explain):
3. System utilization in percent (days of operation divided by reporting time period multiplied by 100). If < 80%, explain:
4. Quantity of groundwater extracted during this time period (gallons):
5. Average groundwater extraction rate (gpm):
6. Quantity of dissolved phase contaminants removed during this time period in pounds: Description: Description: 1. Is free product (nonaqueous phase liquid) being recovered at this site? (Y/N) If yes, list method: No
2. Quantity of free product extracted during this time period (gallons, enter none if none):
3. Average free product extraction rate (gpd): -
C. SYSTEM EFFECTIVENESS EVALUATION: 1. Is a contaminated groundwater plume fully contained in the capture zone? (Y/N) If no, explain: Substantially, slight ES exceedance at MW-A outside capture zone
2. If free product is present, is the free product fully contained in capture zone? (Y/N) If no, explain:
3. If free product is present in any wells at the site, but free product was not recovered during reporting period, explain.
4. If free product is not present, determine the single contaminant that requires the greatest percent reduction to achieve ch. NR 140 ES and PAL. Perform this calculation for all contaminants that were present at the site that have ch. NR 140 standards. Use the highest contaminant concentration measured in any sampling points during reporting period. If free product is present, write "FREE PRODUCT" in C.4.a.
a. Contaminant:
b. Percent reduction necessary to reach ch. NR140 ES and PAL: TCE: ES: 54.5% PAL: 95.5%: MTBE: ES: NA_PAL: 45.5%
c. Maximum contaminant concentration level in any monitoring well of that contaminant (µg/L):
d. Maximum contaminant concentration level in any extraction well of that contaminant (µg/L):
e. If the maximum concentration in a monitoring well is more that one order of magnitude above the concentration measured in an extraction well, explain why the extracted groundwater contamination levels are significantly less than the levels at other locations within the aquifer.
 D. ADDITIONAL ATTACHMENTS: Attach the following to this form: Most recent report to the DNR Wastewater Program, if applicable. Groundwater contour map with capture zone indicated. Groundwater contaminant distribution map (may be combined with contour map). Graph of cumulative contaminant removal, if both free product recovery and ground water extraction are used, provide separate graphs. Time versus groundwater contaminant concentration graphs for the contaminant listed in C.4.a. (above), as follows: Graph of contaminant concentrations versus time for each extraction well in use during the period. Graph of contaminant concentrations versus time for the monitoring well with the greatest level of contamination. Groundwater contaminant chemistry table. Groundwater elevations table. System operational data table.

Praefke Brake and Supply Reporting period: 1/1/99 - 6/30/99 Status Report No. 12

SYSTEM 001 - VOC

Explanation for Page GI-2, C. 3&4 General Effectiveness Evaluation for All Active Systems:

The VOC system was shutdown with WDNR approval on October 30, 1998 for an evaluation period as the system appeared to have reached the limits of its effectiveness. Sampling is being conducted to evaluate concentration trends with the system not operating. Sampling with the system off was conducted on February 10 and 11, 1999 and May 11, 1999. The results show initial decreases in TCE, the contaminant of concern, at all monitoring wells and recovery wells as compared to the August 10, 1998 sampling round with the system on. Recent sampling shows that concentrations at some wells have increased slightly, possibly because of seasonal fluctuations, but still remain approximately the same or below the August 1998 concentrations.

NRT and Praefke have evaluated likely sources of methyl tert butyl ether (MTBE) at MW-6A and MW-6B. As discussed in the preceding status report, the 4,000 gallon UST, which previously existed south of the storage shed and south of MW-2, was not suspected to be the source of MTBE. A boring completed adjacent to the former UST did not indicate the presence gasoline contamination. In addition, monitoring wells MW-G and MW-2 located north of the former UST location (in the direction of groundwater flow) have not previously indicated MTBE or any petroleum related contamination. During the most recent two rounds of sampling, MTBE was not detected at MW-G confirming that the former gasoline UST is not the source of MTBE contamination. The MTBE concentration at MW-6A decreased from 150 ug/L (Nov. 1998) to 5.6 ug/L (May 1999), and the MTBE concentration at MW-6B decreased from 33 ug/L (Feb. 1999) to 22 ug/L (May 1999). For the reason discussed above, it is suspected that the source of this compound is from off-site, possibly one of the gas stations or industries to the south and/or west. Because of the suspected off-site source and the fact that the levels of MTBE are below the enforcement standard, these detects should not affect closure of the site.

Because of the low level stable concentrations, we recommend that the groundwater sampling frequency be reduced to semi-annually in 2000, with possible future reduction to annually assuming continued favorable results. Sampling of monitoring wells and recovery wells would be performed in May and November 2000.

PURPOSE AND APPLICABILITY OF THIS FORM: Completion of this form is required under s. NR 724.13(e), Wis. Adm. Code. Use of this form is mandatory. Failure to submit this form as require is a violation of s. NR 724.13, Wis. Adm. Code, and is subject to the penalties in s. 144.99, Wis. Stats. This form must be submitted every six months for active soil and groundwater remediation projects and every twelve months for passive (natural attenuation) remediation projects that are regulated under the NR 700 series of Wis. Adm. Code. Specifically, for sites meeting any of the following criteria:

- Soil or groundwater remediation projects that report progress in accordance with s. NR 700.11(1), Wis. Adm. Code.
- Soil or groundwater remediation projects that report progress in accordance with s. NR 724.13(3), Wis. Adm. Code. (Note: s. NR 724.13(3) requires progress reports for operation and maintenance of active systems to be submitted every three months however the Department considers submittal of this form every six months to satisfy the requirements of the rules, unless otherwise directed by the Department on a site specific basis.)
- Soil or groundwater remediation projects that report progress in accordance with s. NR 724.17(3), Wis. Adm. Code. (Note: s. NR 724.17(3) requires progress reports every time that samples are collected however the Department considers submittal of this form every twelve months to satisfy the requirements of the rules for monitoring natural attenuation, unless otherwise directed by the Department on a site specific basis.)

Submittal of this form is not a substitute for reporting required by Department programs such as Wastewater or Air Management. Personally dentifiable information on this form is not intended to be used for any other purpose than tracking progress of the remediation by the Bureau for Remediation and Redevelopment.

Please refer to the instructions that are attached to the back of these forms starting on page INS-1. In all cases, when asked to "explain," those explanations are to be included on separate sheets of paper. Explanations must include a title that refers to the page and item number, for example: Page GI-2, C.1.a.

2.	Reporting period from: 1/1/99 To: 6/30/99 Days in period: 181
3.	Regulatory agency (enter DNR, DCOM, DATCP and/or other):
4.	DNR issued site number:Case #02-67-152445FID#267083740_267004430
5.	State reimbursement fund claim number and fund name (if not applicable, enter NA):NA
6.	Site location: a. DNR region and county: <u>Southeast Region, Washington County</u>
	b. Street address and municipality:133 Oak Street, West Bend
	c. Township, range, section and quarter quarter section:
7.	Responsible party: a. Name: <u>Praefke Brake & Supply Corporation</u>
	b. Mailing address: <u>133 Oak Street</u>
	West Bend, WI 53095
	c. Phone number:(414) 334-2355_Mr_Mike Butz
8.	Consultant: a. Company name: <u>Natural Resource Technology, Inc.</u>
	b. Mailing address:23713 West Paul Road
	Pewaukee, WI_53072
	c. Phone number:(414) 523-9000Ms_Laurie Parsons_Ms_Julie Zimdars
9.	Contaminants: Pentachlorophenol_PAHs

OPERATION, MAINTENANCE, MONITORING AND OPTIMIZATION REPORTING OF SOIL AND GROUNDWATER REMEDIATION SYSTEMS

GENERAL SITE INFORMATION, CONTINUED
SITE NAME AND REPORTING PERIOD:
Site name:Praefke Brake (System 002-PCP)
Reporting period from:1/1/99 To:6/30/99 Days in period:181
A. GENERAL INFORMATION (CONTINUED):
13. If soil is treated ex situ, is the treatment location off site? (Y/N) If yes, give location:
a. DNR region and county:
b. Township, range, section and quarter quarter section:
B. REMEDIATION METHOD: Only submit pages that apply to an individual site. Check all that apply:
X Groundwater extraction (submit a completed page GW-1). Free product recovery (submit a completed page GW-2). Groundwater natural attenuation (submit a completed page GW-3). Other groundwater mediation method (submit a completed page GW-4). Soil natural attenuation (submit a completed page GW-2). Soil natural attenuation (submit a completed page GW-3). Other groundwater mediation method (submit a completed page GW-4). Soil natural attenuation (submit a completed page S-2). Other in situ soil remediation method (submit a completed page IS-3). Biopiles (submit a completed page ES-1). Landspreading/hinspreading of pertoleum contaminated soil (submit a completed page ES-2). Other ex situ soil remediation method (submit a completed page ES-3). C. GENERAL EFFECTIVENESS EVALUATION FOR ALL ACTIVE SYSTEMS: If the remediation is active (not natural attenuation), complete this subsection. 1. Is the system operating at design rates and specifications? (Y/N): No. see attached If the answer is no, explain whether or not modifications are necessary to achieve the goal that was previously established in design. 2. Are modifications to the system warranted to improve effectiveness? (Y/N) If yes, see attached 3. Is natural attenuation an effective low cost option at this time? (Y/N): No 4. Is closure sampling warranted at this time? (Y/N): No
4. Total costs during this reporting period (\$): Praefke Brake is performing operation and maintenance
5. Total anticipated costs for the next reporting period (\$): Praefke Brake is performing operation and maintenance
6. Are any unusual or one-time costs listed in the reporting periods covered by D.3., D.4. or D.5. above? (Y/N) If yes explain: <u>No</u>
7. If close out is anticipated within 12 months, estimated costs for project closeout (\$):

OPERATION, MAINTENANCE, MONITORING AND OPTIMIZATION REPORTING OF SOIL AND GROUNDWATER REMEDIATION SYSTEMS

GENERAL SITE INFORMATION, C	ONTINUED
SITE NAME AND REPORTING PERIOD:	
Site name:Praefke Brake (System 002-PCP)	
Reporting period from: <u>1/1/99</u> To: <u>6/30/99</u>	Days in period: <u>181</u>
E. NAME(S), SIGNATURE(S) AND DATE OF PERSON(S) SUBMITTING FORM: Le submit reports under ch. NR 712 Wis. Adm. Code are to sign this form.	gibly print name, date and sign. Only persons qualified to
Registered Professional Engineers:	
I (print name) <u>Laurie J. Parsons, Julie A. Zimdars</u> , hereby certify Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wis. Adm. with the rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to document is correct and the document was prepared in compliance with all applicable	that I am a registered professional engineer in the State of Code; that this document has been prepared in accordance the best of my knowledge, all information contained in this e requirements in chs. NR 700 to 726, Wis. Adm. Code.
Signature, title, P.E. number and date:	A Engineer, #31, 452, 9/16/99
Hydrogeologists:	and the second and the second and the second s
NR 712.03(1), Wis. Adm. Code, and that, to the best of my knowledge, all informati was prepared in compliance with all applicable requirements in chs. NR 700 to 726, V Signature, title and date:	rong that I am a hydrogeologist as that term is defined in s. on contained in this document is correct and the document Nis. Adm. Code.
Scientists:	
I (print name), hereby certify tha Wis. Adm. Code, and that, to the best of my knowledge, all information contained in compliance with all applicable requirements in chs. NR 700 to 726. Wis. Adm. Code.	t I am a scientist as that term is defined in s. NR 712.03(3), this document is correct and the document was prepared in
Signature, title and date:	·
Professional Seal(s), if applicable:	
JULIE A. ZIMDARS E-31,452 GERMANTOWN WI UNITED SSIONAL ENGINEERING	LAURIE J. PARSONS E-27812 Hartford, WI

GROUNDWATER PUMP AND TREAT SYSTEMS AND FREE PRODUCT RECOVERY SYSTEMS
SITE NAME AND REPORTING PERIOD:
Site name:Praefke Brake (System 002-PCP)
Reporting period from: <u>1/1/99</u> To: <u>6/30/99</u> Days in period: <u>181</u>
Date that the system was first started up:12/6/95
A. GROUNDWATER EXTRACTION SYSTEM OPERATION: 1. Total number of groundwater extraction wells or trenches available and the number in use during period: 3/1 (RW-2B shut down 2/12/99) (RW-2C shut down 11/18/97)
2. Number of days of operation (only list the number of days the system actually operated, if unknown explain):
3. System utilization in percent (days of operation divided by reporting time period multiplied by 100). If < 80%, explain:100%
4. Quantity of groundwater extracted during this time period (gallons): 485,550 gal
5. Average groundwater extraction rate (gpm): 1.86 gpm
6. Quantity of dissolved phase contaminants removed during this time period in pounds:0.032 lb PCP
B. FREE PRODUCT RECOVERY SYSTEM OPERATION:
1. Is free product (nonaqueous phase liquid) being recovered at this site? (Y/N) If yes, list method:
2. Quantity of free product extracted during this time period (gallons, enter none if none):
3. Average free product extraction rate (gpd):
C. SYSTEM EFFECTIVENESS EVALUATION: 1. Is a contaminated groundwater plume fully contained in the capture zone? (Y/N) If no, explain:No
2. If free product is present, is the free product fully contained in capture zone? (Y/N) If no, explain:
3. If free product is present in any wells at the site, but free product was not recovered during reporting period, explain.
4. If free product is not present, determine the single contaminant that requires the greatest percent reduction to achieve ch. NR 140 ES and PAL. Perform this calculation for all contaminants that were present at the site that have ch. NR 140 standards. Use the highest contaminant concentration measured in any sampling points during reporting period. If free product is present, write "FREE PRODUCT" in C.4.a.
a. Contaminant: <u>Pentachlorophenol</u>
b. Percent reduction necessary to reach ch. NR 140 ES and PAL: ES: 99.77 %; PAL = 99.97%
c. Maximum contaminant concentration level in any monitoring well of that contaminant (µg/L): 440 µg/L
d. Maximum contaminant concentration level in any extraction well of that contaminant (µg/L):
e. If the maximum concentration in a monitoring well is more that one order of magnitude above the concentration measured in an extraction well, explain why the extracted groundwater contamination levels are significantly less than the levels at other locations within the aquifer.
 D. ADDITIONAL ATTACHMENTS: Attach the following to this form: Most recent report to the DNR Wastewater Program, if applicable. Groundwater contour map with capture zone indicated. Groundwater contaminant distribution map (may be combined with contour map). Graph of cumulative contaminant removal, if both free product recovery and ground water extraction are used, provide separate graphs. Time versus groundwater contaminant concentration graphs for the contaminant listed in C.4.a. (above), as follows: Graph of contaminant concentrations versus time for each extraction well in use during the period. Graph of contaminant concentrations versus time for the monitoring well with the greatest level of contamination. Groundwater contaminant chemistry table. Groundwater elevations table. System operational data table.

Praefke Brake and Supply Reporting Period: 1/1/99 – 6/30/99 Status Report No. 12

SYSTEM 002 – PCP

Explanation for Page GI-2, C. 1,2, and 5. General Effectiveness Evaluation for All Active Systems

As discussed in previous status reports, minimal drawdown influence from pumping at RW-2A has been observed, with a radius of influence of less than 20 feet. The 1999 PCP groundwater concentrations at monitoring wells MW-3 (on-site) and MW-H (off-site) were lower than August and November 1998 concentrations. Based on review of the attached graphical results for MW-3 and MW-H, the concentration of PCP at these wells appears to fluctuate with seasonal water table variation, with concentration peaks during the August/November time period. Sampling from MW-D1 and MW-D2 was performed in May 1998 and May 1999 as a check on groundwater quality down-gradient of the plume area. During both sampling rounds, no PCP or PAH concentrations were detected at MW-D1 or MW-D2. These wells will be sampled again in May 2000.

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PCP contaminated soil remains on-site, possibly occurring below the water table, and is potentially a continuing source. The most effective method for improving the performance of the remediation system and reducing dissolved PCP concentrations would be to address the source of the PCP impacts.

Explanation for Page GW-1, C. 1. System Effectiveness Evaluation

PCP concentrations continue to be variable at MW-H, which is out of the capture zone of the system (across the railroad tracks). Of note, the "design" capture zone of the system did not include well MW-H.

Explanation for Page GW-1, C. 4. E System Effectiveness Evaluation

Because of the longer and deeper well screen at RW-2A vs. MW-3, more dilution is occurring at RW-2A. In addition, active pumping at RW-2A increases dilution and decreases desorption of contaminants into groundwater.

Explanation for Page GW-1, D. Additional Attachments

System Operational Data (We are submitting a written explanation in lieu of a table)

Only one pump, RW-2A, is currently operating at the site. RW-2B, ran until February 12, 1999 when it was shut down because of its low productivity and non-detectable concentrations. The pump at RW-2C was shut down on November 18, 1997. Well RW-2A produced approximately 95 % of the total flow while it and RW-2B were running. Flow rates during January 1 through June 30, 1999 averaged 2,683 gallons per day (1.86 gpm). RW-2A has operated essentially non-stop this reporting period except for

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SYSTEM 002 - PCP

maintenance activities. On February 9, 1999, the pump at RW-2A was replaced. On May 24, 1999, the pump at RW-2A was cleaned, and both the pump and floats were raised 2 feet due to sediment at the bottom of the well. Since RW-2A has been the only operational pump on site, its average pumping rate has been 1.82 gpm.

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FIGURES







TABLES

Table 1 - Groundwater Analytical Summary Volatile Organic Compounds (VOCs) Praefke Brake and Supply Corporation - West Bend, WI

Natural	
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VOCs (µg/L)																							
sample Location	Sample Date	Acctone	Benzene	Carbon Disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	1,1-Dichloroethane	1,2-Dichlorocthane	1,1-Dichloroocthylene	1,2-Dichloropropane	Ethylbenzene	Methylene Chloride	MEK	MIBK	MTBE	Naphthalene	Tetrachlorocthene	Toluene	1,1,1-Trichloroethane	Trichloroethene	Xylenes
										SYS	TEM #1												
MW-2	9/25/87		nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	1.3			nd	nd	nd	nd	0.6	nd	nd
	3/88		1.4		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd	nd
	5/88		nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-		nd	nd	nd	nd	nd	nd	nd
	2/89		nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd	nd
	1/94		nd		nd	nd	_nd	nd	nd	nd	nd	nd	nd	nd	-+		nd	nd	nd	nd	nd	nd	nd
	12/6/95	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	2/27/96	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nđ	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	5/14/96	5.6	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	8/13/96	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	11/14/96	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	2/3/97	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	5/13/97	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
								· · ·									<u> </u>						
MW-G	2/89		nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd			nd	nd	nd	3.0	20	nd	nd
	1990		nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	9.1	nd	nd
	1/94		nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	<u></u>		nd	nd	nd	nd	2.2	nd	nd
	12/6/95	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	5/14/96	8.1	nd	na	nd	na	na	na	na	na	na	na	na	na	na	na	nd	na	nd	na	na	nd	nd
	8/13/96	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	1.0	na	na
	11/14/96	na	<u> na</u>	na	na	nd	nu	nu	nd	na	nd	na	na	na	nd	nd	na	nd	na	na	<u>na</u>	na	na
	2/3/97	na	na	na 	na	nd	nd	nd	nd	nd	nd	nu	nu	nd	nd	nd	nu	nd	nd	na	0.31	na	na
	5/10/09	nd	nu		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.35	nd	nd
	2/10/00	nd	nd	1.0 (D)	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.40	nd	nu nd
	5/11/99	nd	nd	nd	nd	nd	nd	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	0.40	nd	nd
	5/11/22			- 114		110		114		- 114												114	
		[· · · · · · · · · · · · · · · · · · ·						-	<u> </u>			
MW-6/6A	9/25/87		nd		nd	nd	nd	1.2	1.1	nd	2.7	nd	nd	1.1			nd	nd	nd	nd	180	3-230	nd
	3/88		3.7		nd	nd	nd	nd	nd	nd	nd	nd	nd	18			nd	nd	nd	nd	140	- 78	nd
	5/88		nd		nd	nd	nd	nd	nd	nd	311	nd	nd	nd			nd	nd	nd	nd	210	180	nd
	2/89		nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	260	120	nd
· · · · =-	ļ	l	.					<u>1</u> 17	sconsin	Ground	vater Qu	ality Sta	ndards								1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 -	CARLINE / TRANSPORT	
NR 140	PAL	200	0.5	200	0.5	ns	80	0.6	85	0.5	0.7	0.5	140	0.5	90	50	12	8	0.5	68.6	40	0.5	124
NR 140 ES		1000	5	1000	5	ns	400	6	850	5	7	5	700	5	460	500	60	40	5	343	200	5	620

1 of 5

Table 1, continued - Groundwater Analytical Summary Volatile Organic Compounds (VOCs) Praefke Brake and Supply Corporation - West Bend, WI

	VOCs (µg/L)											l											
Sample Location	Sample Date	Acetone	Benzene	Carbon Disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichlorooethylene	1,2-Dichloropropane	Ethylbenzene	Methylene Chloride	MEK	MIBK	MTBE	Naphthalene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	Trichloroethene	Xylenes
	1						·	·····		<u>SYSTE</u>	<u>M #1 (co</u>	<u>nt.)</u>										Long and	
MW-6/6A	1/94**		nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd			nd	nd	na	nd	6920 S	13	nd
(cont.)	3/94**		nd		nd	nd	nd	nd	nd	na	*2/3.2	na	na	na			na	na	na	na	2950	2.65	nd
	12/6/95	nd	nd	nd	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	28	4.4	na
	2/2//90		nd	nd	nd	nd	nd	nd	-2.2	nu nd	nd	nd	nu	nd	nd	nd	nd	nd	nd	nu	64	11.5	nd
	8/11/06	0,0	nd	nd	nd	nd	nd	nd	1.4	nd	nu	nd	nd	nu	nd	nd	nd	nd	nd	nd	10	1.3	nu
	11/14/96	nd	0.6	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	17	61	nd
	2/3/97	nd	nd	nd	nd	nd	nd	0.47	0.51	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	60	. 23	nd
	5/13/97	nd	nd	nd	nd	nd	nd	0.69	0.53	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	63	15-0	nd
	8/14/97	4.1 (L)	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	98	71	nd
	11/3/97	3.6 (L)	nd	nd	nđ	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	7.8	3.8	
	2/3/98	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	4.6	2.2	nd
	5/19/98	nd	nd	1.9 (B)	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	5.4	2.8	nd
	8/10/98	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd		nd	47	nd	nd	nd	2.0	1.5	nd
	11/10/98	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	* 150 ×	nd	nd	nd	nd	nd	nd
	2/10/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	28	nd	nd	nd	nd	1.2	nd
	5/11/99	nd	nd	nd	nd	nd	nd	nd	nd	nd		nd	nd	nd	nd	nd	5.6	nd	nd	nd	2.3	1.6	nd
										1			<u> </u>									<u> −=</u> _	
MW-6B	3/88		1.4		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	9.2	4.5	nd
	5/88		nd		nd	nd	nd	nd	nd	nd	nd	nd	nđ	nd			nd	nd	nd	nd	6.5	2.0	nd
	2/89		nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	3.6	0.6	nd
	1/94		nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	8.9	nd	nd
	12/6/95	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	2/27/96	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	12	1.1	nd
	5/14/96	7.6	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	7.3	nd	nd
	8/13/96	nd	nd	nd	nd	nd	nd	nd	nd	_nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	4.1	nd	nd
	11/14/96	nd	0.58	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nđ	nd	nd	nd	nd	4.6	nd	nd
	2/3/97	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	5.0	nd	nd
	5/13/97	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	7.2	0.63	nd
	5/19/98	nd	nd	1.9 (B)	nd	no	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	4.3	nd	nd
	2/10/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	33	nd	nd	nd	1.9	nd	nd
	3/11/99	na	na	na	na	na	na		na	Crowned		na na	na na	na	na	na	44	na	nd	nd	1.9	nd	nd
NID 140	DAT	200	0.5	200	0.5		1 80	<u>111</u>	2001310	orouna 0 s	anter Ou			0.5	00	E 0		0	0.5	(0)			
ND 140	0 5 5	1000	5	1000	5		100		850	5	7	0.3	700	5	20	50	- 12	0 40	0.5	00.0	40	<u> </u>	124
NR 140 ES		1,000	2	1 1000	1 3	115	400	<u> </u>	030	1 3	<u> </u>	3	100	<u> </u>	400	. 300	00	40	3	343	200	5	620

Natural Resource Technology

Table 1, continued - Groundwater Analytical Summary Natural Resource Volatile Organic Compounds (VOCs) Technology Praefke Brake and Supply Corporation - West Bend, WI VOCs (µg/L) 1, I-Dichlorooethylene I, I, I-Trichloroethane Carbon Tetrachloride I,2-Dichloropropane Methylene Chloride 1, 1-Dichloroethane 1,2-Dichloroethane Tetrachloroethene Carbon Disulfide Sample Location Trichloroethene Chlorobenzene Ethylbenzene Naphthalene Chloroethane Sample Date Chloroform Toluene Xylenes Acetone Benzene MTBE MIBK Æ SYSTEM #1 (cont.) MW-A 3/88 nd nd nd nd nd nđ nd nd 24 300 nd nd --nd nd nd nd nd nd ----•• 5/88 nd -nd nd nd nd nd nd nd nd nd nd •• •• nd nd nd nd 7.8 180 nd -nd 6.3 110 nd 2/89 .. nd -nd nd nd ---nd 1/94 -nd ••• nd nd nd nd nd nd 3.2 nd nd nd -----nd nd nd nd 67 9.5 nd 12/6/95 nđ nd nđ nd nd nď nd 1.7 nd 120 18 nd 2/27/96 nd nd nd nd nd nd 1.4 nd 33 7.9 nd 6.4 nđ nd nd 1.4 nd 2.7 nd nd 5/14/96 nd nd nd nd nd nd nd nd nd nđ <u>60</u> 12. nd 8/13/96 nd nd nď nd nd nđ nd 3.8 nd 3.3 nd nđ nd nd nd nd nd nd nd 120 244 nd 11/14/96 nd nd nđ nd nd nd nd 1 nd 32 13 nd 0.39 2/3/97 nd 0.85 nd nd nd nd 0.84 nd 23 9.4 1.5 5/13/97 nd 0.43 nd nd nd nd 0.84 0.53 nd 1.1 nd nd 0.37 5.5 nd nd nd nd nd nd 29 nd 8/14/97 0.67 nd 14 nd nd nd nd 0.80 nd 1.8 nd nď nd nd nd nd 4.4 nd nd 17 4.8 1.8 11/3/97 5.4 (L) 1.2 nd nd 64 nd nd 0.84 nd nđ nd nd nd 1.3 (L) nđ nd nď nd 0.97 13 6.6 29 2/3/98 4.7 (L) nd nd nd nd nd 0.62 nd nď nd nd nd nd 3.7 nd nđ 4.4 nd nd 0.82 <u>0.9</u> nd 5/19/98 4.0 (B) 2.2 2.0 (B) nd 0.56 nđ nd nđ nd nd nd nd nd nd 4.1 1.4 nd nd nd nd nd nd 8/10/98 nd 1.5 -nd nd nd 0.35 0.50 nd 1.0 nd nd nd •• nd nd 2.7 nd 3.3 18 6.9 11 11/10/98 0.22 nd 0.42 nd nd nd 2.6 1.1 nd 2/10/99 nđ nd nđ nd nd nd nd nd nd 1.8 11 nd 5/11/99 0.38 nd nd nd nd nd 0.80 -nd nd nd nd nd nd пd nd nd nd nd 19 6.2 nd 001 Influent 12/6/95 nd nd 3.8 nd nd nd nd nď nđ nd 1.1 nd 2/27/96 16 nd nd nd nd nd nd nd nđ nd nd nd nd nđ nd nd nd nd nd 8.7 1.7 nd 5/14/96 9.0 nd nd nd nđ nd nd nd nd nd nd nđ 2.7 nd nd nd nd nd nd 15 4.1 nd 8/13/96 nd nd nd nd. nd nd. nd nd nd nd 6.4 3.0 nd 11/13/96 6.0 nd nd nđ nd 8.3 <u>3.6</u> nd 2/3/97 nd 0.86 nd 4.2 <u>3.6</u> nd 5/13/97 4.5 nd nd nd nđ nd 12 . 7.3 пd nd 8/14/97 nd nd nd nd nđ nd nd nd nđ nd nd nđ nd nd nd nd nd nd nd 4.5 3.2 nd 11/3/97 3.2 (L) nd nd nd nd nd nd 0.27 nd nd nd nđ nd nd nd nd nd nd nd 7.4 5.9 . nd 2/3/98 4.2 (L) nd 0.29 nđ nd nd nd nd nd nd nd nđ nd 3.1 nd nd nd <u>0.71</u> nd 5.2 4.2 nd 5/19/98 5.7 (B) nd 2.3 (B) nđ nd nd nd nd nd nđ nd nd nd пd nd nd nd <u>0.8</u> nd 6.7 3.2 nđ 8/10/98 nd nd nd nd nd --nd nđ nd nđ nd nd nd •• nd nd nđ nd nd 6.6 9.8 nd Wisconsin Groundwater Quality Standards **NR 140 PAL** 200 0.5 200 0.5 80 0.6 85 0.5 0.7 140 0.5 90 50 12 ns 0.5 8 0.5 68.6 40 0.5 124 1000 5 1000 5 400 850 460 500 **NR 140 ES** ns 6 5 7 5 700 5 60 40 5 343 200 5 620

working - VOCs

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Table 1, continued - Groundwater Analytical Summary Volatile Organic Compounds (VOCs) Praefke Brake and Supply Corporation - West Bend, WI



VOCs (µg/L) .1-Dichlorooethylene 1,1,1-Trichloroethane Carbon Tetrachloride 1,2-Dichloropropane Methylene Chloride 1,1-Dichloroethane 1,2-Dichloroethane Tetrachloroethene Carbon Disulfide Sample Location Trichloroethene Chlorobenzene Ethylbenzene Chloroethane Sample Date Naphthalene Chloroform Benzene Acetone Toluene Xylenes MTBE MIBK MEK SYSTEM #1 (cont.) 8/14/97 0.26 RW-1A nd nd nd nd nd nd nd nđ nd nd nd nd nd nd 1.0 13 141 141 nd nd nd nd 11/3/97 nd nd nd nd nd nd nd 0.32 nd nd nd nd nd nđ nd nd nd 0.92 nd 9.1 8.9 nd 2/3/98 3.3 (L) nd nd nd nd nđ nd 0.4 nd nd nd nd nd 3.4 nd nd nd 0.24 nd 11 13 nd 5/19/98 10 (B) nd 2.5 (B) nd nd nd 0.19 nd 0.96 nd 12 13 nd 8/10/98 nd nd --nd nd 0.88 9.3 -nd nd 14 nd 11/10/98 nd nd nd nd nd nd nd 0.77 nd nd nd nd nđ nd nd nd nd 1.1 nd 11 3.1 nd 2/9/99 nd nd nd nd nd nd nđ nd 1.1 nd 2.4 0.7.8 nd 5/11/99 nd nd nd nd nd nd nd nd -nd nd nd nd nd nd nd nd 0.86 nd 4 11 nd RW-IB 8/14/97 nd nđ nd 5.5 1.2 nd 11/3/97 nd nđ nď nd nd nd 3.0 0.66 nd 2/3/98 4.7 (L) nd nđ nd nd nd 1.9 nd nd 5/19/98 8.8 (B) nd 4.2 (B) nd nd nd nd nd nd nď nd nd nđ nd nď nd nd nd nd 3.2 0.76 nd 8/10/98 nd nd -nd nd nd nd nd nd nd nd nd nd -nd nd nd nd nd 2.3 0.89 nd 11/10/98 nd nd nd nď <u>0.83</u> nď nd nd nd nd nd nd nd nd nď nd nd nd nd nd nd nd 2/9/99 nd nd nd nd nđ nd 0.45 nd nd 5/11/99 nd nd nd nd nd nd nd nd nd -nd nd 8/14/97 RW-1C 4.5 (L) nd nđ SYSTEM #2 MW-3 9/25/87 -nd --33 лd 1.2 30 66 nd 5.7 0.3 2.4 2.5 nd --•• nd пd 4.9 180 2.8 nd 3/88 nd 35 nd 24 --•• 6.0 43 nd nd nd nd 17 ---nd nd nd 4.7 65 2.4 nd 5/88 --nd ---14' nd nd *114 43 nd 7.4 9.2 nd nd ---nd nd nd nd <u>50</u> nd nd 2/89 -nd -nd nd nd 1.2 35 0.4 1.3 3.0 -5.2 nd nd ---nd nd 1.5 27 nd nd 1990 -nd -nd nd nd 1.1 2.3 0.5 0.5 nd 2.1 3.5 -----nd nd nđ 2.2 15 nd nd 1/94 -nd ---1.2 nd nd 1.4 6.7 nd nd nd 1.9 nd -nd 13 --nd nd 6.0 nd 24 MW-4 9/25/87 nd nd nd nd 0.6 nd nd ---nd nd nd 1.3 nd ---nd nd nd nd nd nd 3/88 -nd --nd nd nd nd nd nd nd nđ nd nd ----nđ nd nd nd nd nd nd 5/88 -nd -nd nd nd nd nd nd nđ nd nd nđ •• --nd nd nd nd nd nd nd 6/26/95 -nd -nd nd nd nd nd nd nđ nd nd nd nd nd nd nd 31 ----<u>3.2</u> nd Wisconsin Groundwater Quality Standards **NR 140 PAL** 200 200 0.5 0.5 ns 80 0.6 85 0.5 0.7 0.5 140 0.5 90 50 12 0.5 68.6 40 8 0.5 124 **NR 140 ES** 1000 5 1000 5 ns 400 6 850 5 7 5 700 5 460 500 60 40 5 343 200 5 620

Table 1, continued - Groundwater Analytical Summary Volatile Organic Compounds (VOCs) Praefke Brake and Supply Corporation - West Bend, WI



	VOCs (μg/I															VOCs (µg/L)									
Sample Location	Sample Date	Acetone	Benzene	Carbon Disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichlorooethylene	1,2-Dichloropropane	Ethylbenzene	Methylene Chloride	MEK	MIBK	MTBE	Naphthalene	Tetrachloroethene	Toluene	1,1,1.Trichloroethane	Trichloroethene	Xylenes		
										SYSTE	M #2 (co	ont.)													
MW-H	2/89		nđ		nd	nd	nd	nd	2.9	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd	nd		
	1990		nd		nd	nd	nd	1.6	2.7	0.2	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd	nd		
	1/94		nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd	nđ		
								Ші	sconsin	Ground	vater Qi	ality Sta	undards.												
NR 140) PAL	200	0.5	200	0.5	ns	80	0.6	85	0.5	0.7	0.5	140	0.5	90	50	12	8	0.5	68.6	40	0.5	124		
NR 14	IO ES	1000	5	1000	5	ns	400	6	850	5	7	5	700	5	460	500	60	40	5	343	200	5	620		

Notes:

1) nd = not detected

2) -- = not analyzed

3) ns = no NR 140 standard currently exists.

4) ** = Elevated detection limit

5) L = compound is a common lab solvent and contaminant.

6) Bold and underline is a NR 140 Preventive Action Limit (PAL) exceedance

7) Bold and shaded is a NR 140 Enforcement Standard (ES) exceedance

The table will be updated if more accurate information is found.

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8) Only compounds that were detected are shown.

9) B = Blank is Contaminated

and chlorodibromomethane (0.18 µg/L) below the laboratory LOQ. 11) MW-A, 8/14/97, contained detections of bromodichloromethane (0.38 µg/L) and chlorodibromomethane (0.25 µg/L) below the laboratory LOO. 12) MW-A, 11/3/97, contained detections of bromodichloromethane (0.3 µg/L), and chlorodibromomethane (0.25 µg/L) below the laboratory LOO. 13) MW-A, 2/3/98, contained detections of bromodichloromethane (0.42 ug/L), and chlorodibromomethane (0.19 ug/L) below the laboratory LOQ.

10) MW-A, 5/13/97, contained detections of bromodichloromethane (0.33 µg/L)

14) Recovery well RW-1C was shutdown due to non-detectable concentrations.

15) MW-A, 5/19/98, contained detections of bromodichloromethane (0.22 µg/L)

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below the laboratory LOO.

General Note : This summmary table was developed from available information; some minor inaccuracies may exist in the 1987 through 1994 data.

rev. 1/99 By: dvp/jag/slm/dvp/jam Chkd By: jag/tln/jaz

working - VOCs

Table 2 - Groundwater Analytical Summary Semi-Volatile Organic Compounds (SVOCs) Praefke Brake and Supply Corporation - West Bend, WI

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SVOCs (µg/L) ACID COMPOUNDS BASE/NEUTRALS 2-Methyl-4,6-dinitrophenol 4-Methylphenol (p-Cresol) Bis(2-ethylhexyl)phthalate N-nitrosodiphenylamine 2,4,5-Trichlorophenol 2,4,6-Trichlorophenol l-Methylnaphthalene 2-Methylnaphthalene 2,4-Dimethylphenol Di-n-butyl phthalate 2,4-Dichlorophenol entachlorophenol Sample Location Acenaphthylene Cresols, Total Acenaphthene 2-Nitroaniline Dibenzofuran Phenanthrene Fluoranthene Sample Date Naphthalene Anthracene Fluorene Phenol SYSTEM #1 MW-2 9/25/87 nd --nd nd nđ nd nd nd nd nd nd nd 3/88 nd -nd nd nd nd nd nd nd ... --------------------. . •• ---5/88 nd -nd nd nd nd nd nd nd -------------------... ----------•• •• 2/89 nd --nd nd nd nd nd nd nđ --MW-G 2/89 nd -nd nd nd nd nd nd nd ----------.. •• -----------•• --1 --MW-6/6A 9/25/87 nd nd nd nd nd nd nd nd ņd nd 3/88 nd --nd nd nd nd nd nd nd 1 ---------------------------1 1 5/88 nd nd nd -nd nd nd nd nd --------------••• ------------••• ------2/89 nd nd nd --nd nd nd nd nd --•• 1 --------•• -------------... . MW-6B 3/88 nd nd -nd nd nd nd nd nd --** ----------1 -----•• ------5/88 nd nd nd nd nd ** nd nd nd --------•• ---------1 . -------------2/89 nd --nđ nd nd nd nd nd nd ---------... •• ---___ ------------•• -----MW-A 3/88 nd nd nd -nd nđ nd nd nd •• ---------1 1 --•• ------••• --------5/88 nd --nd nd nd nd nd nd nd ... ----------------------------2/89 nd nd nd -nd nđ nd nd nd --... •• ** -----... •• ** •• •• ** Wisconsin Groundwater Quality Standards NR 140 PAL ns 0.1 1,200 20 80 ns ns n s រាន ns ns ns ns 600 0.6 ns 80 8 0.7 ns. ns ns ns **NR 140 ES** 6,000 ns ns ns 🛛 ns ns 1 ns ns ns пs 3,000 6 ns 100 400 400 7 ns ns 40 ПS ns.

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Table 2, continued - Groundwater Analytical Summary Seni-Volatile Organic Compounds (SVOCs) Pracfke Brake and Supply Corporation - West Bend, WI

												svo	Cs (ug/L	a										
]				ACID	COMP	DUNDS				<u>}</u>						BASE	NEUT	RALS					
Sample Location	Sample Date	2-Methyl-4,6-dinitrophenol	Cresols, Total	2,4-Dichlorophenol	2,4-Dimethylphenol	4-Methylphenol (p-Cresol)	Pentachlorophenol	Phenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	Acenaphthene	Accnaphthylene	Anthracene	Bis(2-ethylhexyl)phthalate	Dibenzofuran	Di-n-butyl phthalate	Fluoranthene	Fluorene	I-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	2-Nitroaniline	N-nitrosodiphenylamine	Phenanthrene
	· · · · · · · · · · · · · · · · · · ·									S	YSTEM	#2												
MW-3	9/25/87	nd		13	nd	nd	590	nd	nd	nd	nd	nd	nd	nd	nd	1.7	nd	nd	nd	nd	nd	nd	nd	nd
	3/88	nd		nd	nd	nd	16,000	nd	nd	nd											••			
	5/88	nd		nd	nd	nd	590	nd	nd	nd														
	2/89	nd		nd	nd	nd	5,000	nd	nd	39	-	-												
	1990	nd		nđ	nd	nđ	4,000	nd	nd	nd	nd	140	nd	nd	nd	nd	nd	5.6	nd	nd	160	nd	nd	nd
	1/94	nd		nd	1.0	6	3,700(E)	nd	4.0	nd	nd	30	0.15	nd	2.0	nd	nd	4.8	nd	78	91	nd	nd	2.2
	10/18/95	nd	nd	nd	nd		#1,100	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	12/6/95	nd	nd	nd	nd	••	590	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	120	76	nd	nd	nd
	2/27/96	nd	nd	nd	nd		.2300	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	100	110	nd	nd	nd
	5/14/96	nd	17	nd	nd		450	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	130	2110 <	nd	nd	nd
	8/13/96**	nđ	nd(M)	nd(M)	nd(M)	••	2,000	nd	nd(M)	nd(M)	nd	nd(M)	nd(M)	nd(M)	nd(M)	nd(M)	nd(M)	nd(M)	nd(M)	nd(M)	nd(M)	nd(M)	nd(M)	nd(M)
	11/14/96	nd		nd	nd			nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	200	160	nd	nd	nd
	2/3/97	nd	0.2	na	2.8		1/0	2.5	0.5	nd	nd	nd	4.3	nd	4.7	nd	nd	4.6	nd	140	120	3.4	nd	4.3
	3/13/97	na	4.1	na	na		050	2.2	<u>na</u>	na d	nd nd (M)		0.13				0.35	1.7	- 30	- 00	A3			1.3
	0/14/97	nd	9.0	nd	nd		2,000	3.2 	8.0	nd	2 5	na(N)	0.50				na(M)	10	200	280	2/0			4.4
	2/2/09	nd	a.u nd	nd	nd		1 800	nd	86	nd		nd nd	- 0.39 - nd	<u> </u>	<u> </u>		na nd	12	190	270	420			8.3
	\$/10/08	nd	nu	nd	nd		300	nd	0.0 nd	nd	32	nd	nd		<u> </u>		nd	4,2	- 13	29	- 10 	<u> </u>		nd 0.62
	8/10/98	nd	5.8	nd	nd nd		3 200	nd	13	nd		nd	11		- <u>-</u>		nd	13	22	420	110	<u> </u>		6.02
	11/10/98	nd(M)	nd(M)	nd(M)	nd(M)		1.200	nd(M)	nd(M)	nd(M)	nd	nd	0.66				0.57	15	170	330	250			7.4
	2/10/99	nd	nd	nd	nd		76	nd	nd	nd		nd	nd				nd	nd	nd	nd	nd	<u> </u>		7.4 nd
	5/11/99	nd	nd	nd	nd		440	nd	nd	nd	nd	nd	nd				nd	nd	13	18	91			nd
												1		1							2003 23.0			
									Wiscon	isin Grou	ndwater	Quality ;	Standary	5					•	•	•		J	<u> </u>
NR 140) PAL	ns	ns	ns	ns	ns	0.1	1,200	ns	ns	ns	ns	600	0.6	n\$	20	80	80	ns	ns	8	D\$	0.7	ns
• NR 14	OES	ns	ns	ns	ns	ns.	1	6,000	ns	ns	ns	ns	3,000	6	ns	100	400	400	ns	ns	40	ns	7	ns

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Table 2, continued - Groundwater Analytical Summary Semi-Volatile Organic Compounds (SVOCs) Pracfke Brake and Supply Corporation - West Bend, WI

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												SVO	Cs (µg/l	.)										
					ACID	COMP	OUNDS										BASE	E/NEUTI	RALS					
Sample Location	Sample Date	2-Methyl-4,6-dinitrophenol	Cresols, Total	2,4-Dichlorophenol	2,4-Dimethylphenol	4-Methylphenol (p-Cresol)	Pentachlorophenol	Phenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	Accnaphthene	Acenaphthylene	Anthracene	Bis(2-ethylhexyl)phthalate	Dibenzofuran	Di-n-butyl phthalate	Fluoranthene	Fluorene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	2-Nitroaniline	N-nitrosodiphenylamine	Phenanthrene
	<u> </u>									SYS	TEM #2	(cont.)												
MW-4	9/25/87	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	3/88	ndi		nđ	nd	nd	nd	nd	nd	nd							•••							
	5/88	nd		nd	nd	nd	nd	nd	nd	nd														-
	2/27/96	nd	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	5/14/96	nd	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nđ	nd	nd	nd	nd	nd	nd
	8/13/96	nd	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	11/14/96	nd	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	2/3/97	nd	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	2.2	nd
	5/13/97	nd	nd	nd	nd		nd	nd	nd	nd								<u> </u>			•••			
	5/19/98	nd	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd				nd	nd	nd	nd	nd			nd
	5/11/99	nd	nd	nd	nd	<u> </u>	nd	nd	nd	nd	nd	nd	nd	<u> </u>						<u> </u>				nđ
	2/00	 	 										 	 						 	i——			ļ
MW-H	2/89	na		na	na	na	3/9	na	na													<u> </u>		<u> </u>
	1990	na		na	na	na	/V **	na	<u>na</u>	<u>na</u>	- <u></u>	na	na	na	na na	na	na	na i	na -	na	na	na	nd	nd
	1/94	na		na	na	<u>nu</u>	04(E)	na	na	na	na	na		na	na	na	na	na		na	na	na	na	nd
	10/18/95	nd	nd	nd	nd		210		<u>na</u>	nd nd	<u>na</u>	nd	na	nd nd	na	na	na	nd	na	na	na	na	na	na
	2/27/04	nd		nd	nd		1042 ACO 25	nd			- <u>nu</u>	nd nd	nd nd		<u>na</u>	- <u>ha</u>	nd	nu nd	na	na	na	na	na	na
}	5/14/96	nd nd	nd nd	nd	nd		460**	nd	nd	nd			nd	nd nd	nd	nu nd	nd	nd nd	nd	nd	nd	nd	na	no nd
	8/13/96	nd(M)	nd(M)	nd(M)	nd(M)		nd (M)	nd (M)	nd(M)	nd(M)	nd (M	nd(M)	nd(M)		nd(M)	nd(M)	nd(M)	nd(M)	nd(M)	nd(M)		nd(M)	nd(M)	nd(M)
	11/14/96	nd	nd	nd	nd		310	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	11	nd	nd	nd
	2/3/97	7.6	nd	nd	nd		240	nd	nd	nd	nd	nd	nd	3.4	nd	nd	nd	nd	nd	nd		nd	nd	nd
	5/13/97	nd	nd	nd	nd	-	400	nd	nd	nd														
	8/14/97	nd	nd	nd	nd		2.200	nd	nd	nd									-					
	11/3/97	nd	nd	nd	nd		2,800	nd	8.6	nd				-		-					-			
	2/3/98	nd	nd	nd	nd		450	nd	nd	nd		-						-						-
	5/19/98	nd	nd	nd	nd	-	110	nd	nd	nd	0.72	nd	nd				nd	nd	nd	nd	nd			nd
	8/10/98	nd	nd	nd	nd		280	nd	nd	nd	nd	nd	nd		-		nd	nd	nd	nd	nd			nd
	11/10/98	nd(M)	nd(M)	nd(M)	nd(M)		510 .	nd(M)	nd(M)	nd(M)	nd	nd	nd				nd	nd	4.2	nd	1.4			nd
	2/10/99	nd	nd	nd	nd		140	nđ	nd	nd	nd	nd	nd				nd	nd	nd	nd	nd			nđ
	5/11/99	nd	nd	nd	nđ		<3.0	nd	nd	nd	nd	nd	nd				nd	nd	nd	nd	nd			nd
		L							1									L						
		,	r		T			1 4 4 4 4	<u>Wiscor</u>	i <u>sin Grou</u>	ndwater	<u>Quality</u> .	Standard	<u>ls</u>	r			<u> </u>				r		
NR 140	0 PAL		ns	N	<u>ns</u>	<u>nı</u>	0.1	1,200		<u></u>	- 115		600	0,6	n	20	80	80	n	<u></u>	8	nı	0.7	ns
[NR 14	40 ES	ns	103	i na	ns 🛛	ns	1 1	6,000	- 11.5	ns	ns	ns	3,000	6	ns	100	400	400	813	ns	40	i na	7	ns

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Table 2, continued - Groundwater Analytical Summary Semi-Volatile Organic Compounds (SVOCs) Pracfke Brake and Supply Corporation - West Bend, WI 4 ' 1

Natural		
Resource		
Technology		

												SVO	Cs (µg/L	.)										
	(ACID	COMPO	DUNDS										BASE	NEUTI	RALS					
Sample Location	Sample Date	2-Methyl-4,6-dinitrophenol	Cresols, Total	2,4-Dichlorophenol	2,4-Dimethylphenol	4-Methylphenol (p-Cresol)	Pentachlorophenol	Phenol	2.4.5-Trichlorophenol	2,4,6-Trichlorophenol	Acenaphthene	Acenaphthylene	Anthracene	Bis(2-ethylhexyl)phthalate	Dibenzofuran	Di-n-butyl phthalate	Fluoranthene	Fluorene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalenc	2-Nitroaniline	N-nitrosodiphenylamine	Phenanthrene
										SYS	TEM #2	(cont.)												
002 Influent	12/6/95	nd	nd	nd	nd	1	nd	nd	nd	nd	nd	23	nd	nd	nd	nd	nd	nd	nd	nd	nđ	nd	nd	nd
	2/27/96	nđ	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	5/14/96	nd	nd	nd	nd		38 -	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	8/13/96	nd	nd	nd	nd		28	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	11/13/96	nd	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	2/3/97	nd	nd	nd	nd		nd	nd	nđ	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nđ	nd	nd	2.6	nd
	5/13/97	nd	nd	nd	nd		244	nđ	nd	nd				:		1	1					1		
	8/14/97	nđ	nd	nd	nd		8 431 .2	nd	nd	nd				1	-	1	1	1	-			:		
	11/3/97	nd	nd	nd	nd		etw34 (%)	nd	nd	nd			:	-	-	1	1	1						
	2/3/98	nd	nd	nd	nd	-	32	nd	nd	nd			1			1	1					+		
	5/19/98	nd	nd	nd	nd		3311.0	nd	nd	nd		-				1	-	-				-		
	8/10/98	nd	nd	nd	nd		361	nd	nd	nd					-		-							
	11/10/98	nd	nd	nd	nd		iii 13 🕼	nd	nd	nd														
	2/9/99	nd	nd	nd	nd	-	<u>i 16</u>	nd	nd	nd														
	5/11/99	nd	nd	nd	nd		<3.0	nd	nd	nd														
				ł																				
MW-D1	5/19/98	nd	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd				nd	nd	nd	nd	nd			nd
	5/11/99	nd	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd				nd	nd	nd	nd	nd			nđ
MW-D2	5/19/98	nd	nd	nd	nd		nd	nd	nđ	nd	nd	nd	nd				nd	nd	nd	nd	nd			nd
	5/11/99	nd	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd				nd	nd	nd	nd	nd			nd
			1																					
									Wiscor	isin Grou	ndwater	Quality .	Standara	<u>ls</u>										
NR 140) PAL	ns	ns	ns	ns	ns	0.1	1,200	ns	. ns	ns	ns	600	0.6	ns	20	80	80	ns	ns	8	. ns	0.7	ns
NR 14	0 ES	ns	ns	ns	ns	ns	1	6,000	ns.	ПS	ns	ns	3,000	6	ns	100	400	400	ns	ns	40	ns	7	ns

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Table 2, continued - Groundwater Analytical Summary Semi-Volatile Organic Compounds (SVOCs) Praefke Brake and Supply Corporation - West Bend, WI

Natural	
Resource Technology	

												SVO	Cs (µg/I	.)										
	1				ACID	COMP	DUNDS										BAS	E/NEUT	RALS					
Sample Location	Sample Date	2-Methyl-4,6-dinitrophenol	Cresols, Total	2,4-Dichlorophenol	2,4-Dimethylphenol	4-Methylphenol (p-Cresol)	Pentachlorophenol	Phenol	2,4,5-Trichlorophenol	2,4.6-Trichlorophenol	Acenaphthene	Acenaphthylene	Anthracene	Bis(2-ethylhexyl)phthalate	Dibenzofuran	Di-tt-butyl phthalate	Fluoranthene	Fluorene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthaiene	2-Nitroaniline	N-nitrosodiphenylamine	Phenanthrene
										SYS	TEM #2	(cont.)												
RW-2A	8/14/97	nd	nd	nd	nd		64	nd	nd	nd				-		••	-				**			
	11/3/97	nd	nd	nd	nd		St 61 👾	nd	nd	nd				-						-	1	:		
	2/3/98	nd	nd	nd	nd		17. *	nd	nd	nd														
	5/19/98	nd	nd	nd	nd			nd	nd	nd														
	8/10/98	nd	nd	nđ	nd			nd	nd	nd		-									-			
	11/10/98	nd	nd	nd	nd		1. 13	nd	nd	nd											••			
	2/9/99	nd	nd	nd	nd		8.4	nd	nđ	nd						<u> </u>								
	5/11/99	nd	nd	nd	nd		86	nd	nd	nd		<u> </u>					-							
			<u> </u>									I					İ							
RW-2B	8/14/97	nd	nd	nd	nd		nd	nd	nd	nd		-				-				<u> </u>				
	11/4/97	nd		nd	nd		nd	nd	nd	nd														
	2/3/98	nd	nd	nd	nď		nd	nd	nd	nd	<u> </u>					<u> </u>								
	5/19/98	na	na	na	na		na	na	nd	nd														
	8/10/98	na	na	na	na		na	na	na	na		<u> </u>			<u> </u>			<u> </u>						
	2/0/00		nu nd	nd	nd		nd	nd	nd	nu nd									<u> </u>				<u> </u>	
	2/9/99	nu -					na	. 10																ļ <u></u>
	1		ł	<u> </u>											<u> </u>	I	 						<u> </u>	┨────
RW-2C	8/14/97	nd	nd	nd	nd		nd	nd	nd	nd			<u> </u>				-							
	1		1	1		I			Wiscon	isin Grou	ndwater	Ouality .	Standara	ls	I	I			L		L		L	
NR 140	PAL	ns	ns	ns	ns	ns	0.1	1,200	ns	ns	ns	ns	600	0,6	ns	20	80	80	ns	ns	8	ns	0.7	ns
NR 14	IO ES	ns	ns	ns	ns	ns	1	6,000	ns	ns	ns	ns	3,000	6	ns	100	400	400	ns	ns	40	ns	7	ns

Notes:

a) nd = not detected
 a) -- = not analyzed
 b) ns = no NR 140 standard currently exists.
 a) ** = Elevated detection limit

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5) E = Compound concentration exceeds the calibration range of the intrument. 6) M = Matrix interference 7) Bold and underlined = NR 140 Preventive Action Limit (PAL) exceedance. 8) Bold and shaded = NR 140 Enforcement Standard (ES) exceedance. 9) Only compounds that were detected are shown rev. 1/99 By: dvp/jag/slm/dvp/jam Chkd By: jag/th/jaz

General Note : This summmary table was developed from available information; some minor inaccuracies may exist in the 1987 through 1994 data. The table will be updated if more accurate information is found.

Table 3 - Groundwater Elevation DataPraefke Brake and Supply - West Bend, WI

Monitoring We	:11	MW-A	MW-D1	MW-D2	MW-G	MW-II	MW-2	MW-3	MW-4	MW-6A	MW-6B	RW-1A	RW-1B	RW-1C	RW-2A	RW-2B	RW-2C
Ground Surfac	e Elevation (ft)	903.72	911.28	911.54	906.89	908.99	908.08	912.62	906.65	907.30	907.29	905.17	908.26	903.11	913.81	906.86	906.37
TOC Elevation	(ft)	905.55	913.24	913.43	906.57	911.56	909.92	914.53	906.22	906.97	906.81	901.25	904.53	898.99	910.21	902.83	902.64
Well Depth (ft)		27.9	26.1	34.0	23.5	20.7	15.0	20.2	12.0	25.0	34.7	28.40	31.44	32.24	34.00	25.83	12.36
Base of Well El	evation (ft)	877.7	887.1	879.4	883.1	890.9	894.9	894.4	894.2	882.0	872.1	872.9	873.1	866.8	876.2	877.0	890.3
Groundwater H	Elevation (ft)				$\sim 10^{-1}$	1947 (A.S.		P P P		198:213	lo izali		n cosa	an a		us a tes	
	2/21/89	884.75	891.38	892.26	891.95	898.16	895.46	901.62	900.84	887.35	887.42	nm	៣៣	nm	nm	nm	nm
	12/6/89	884.40	891.12	891.99	891.57	897.95	895.13	901.33	'nm	887.01	887.09	nm	nm	nm	nm	nm	nm
	2/27/96	885.30	nm	ņm	nm	898.36	896.28	901.13	900.74	888.24	888.33	nm	nm	nm	nm	nm	nm
	5/14/96	885.13	nm	nm	892.46	898.47	896.28	900.83	901.62	887.55	887.61	nm	nm	nm	nm	nm	nm
	8/13/96	886.14	nm	nm	893.91	898.36	896.90	901.19	901.07	888.89	888.98	nm	nm	nm	nm	nm	nm
	11/14/96	884.99	nm	nm	892.60	898.26	896.03	901.09	900.74	887.52	882.16	nm	nm	ກກາ	nm	nm	nm
	2/3/97	884.44	nm	nm	891.68	898.21	895.36	901.76	900.82	886.77	886.84	nm	nm	nm	nm	nm	nm
	5/13/97	884.99	nm	nnı	892.02	898.93	896.62	901.75	901.47	887.19	887.25	nm	nm	nm	nm	nm	nm
	8/14/97	884.65	nm	nm	nm	898.26	nm	901.18	nm	887.01	nm	nm	nm	nm	nm	nm	nnı
	9/17/97	884.42	891.32	892.17	891.79	898.07	895.51	901.08	900.82	886.74	886.84	884.24	884.73	885.42	878.55	883.06	883.63
	11/3/97	883.98	nm	nm	nm	896.84	nm	901.05	nm	886.30	nm	nm	nm	nm	nm	nm	nm
	2/3/98	883.51	nm	nm	nm	898.04	nm	901.03	nm	885.67	nm	nm	nm	nm	nm	nm	nm
	5/19/98	885.55	893.19	893.58	892.27	898.96	896.76	902.08	901.86	887.92	887.96	887.38	887.06	886.73	892.11	891.59	901.41
	6/23/98	885.14	892.10	892.92	892.53	898.62	896.43	901.86	901.63	887.59	887.67	885.74	884.27	886.24	892.16	891.56	901.13
	8/10/98	884.71	nm	nm	nm	898.58	nm	901.82	nm	886.90	nm	nm	nm	nm	nm	nm	nm
	11/13/98	883.76	891.07	891.99	891.20	898.24	895.20	901.19	901.02	886.20	886.28	885.56	885.18	884.74	881.21	879.31	900.55
	2/10/99	884.35	nm	nm	891.22	898.51	nm	901.38	nm	886.75	886.83	nm	nm	nm	nm	nm	nm
	5/11/99	885.55	892.68	893.64	892.32	899.24	nnı	902.42	902.00	887.81	887:96	nm	nm	nm	nm	nm	nm
	6/8/99	886.05	893.04	893.88	892.96	899.24	897.11	902.29	902.42	888.64	888.72	888.05	887.71	887.35	884.76	901.98	901.69

Notes:

Elevations obtained from survey performed by R.A. Pagels, September 15, 1997. Elevations are referenced to National Geodetic Vertical Datum (NGVD).

Well depth measurements made relative to top of well casing.

nm = not measured.

Pumping at RW-1C was shutdown on 9/8/97 and pumping at RW-2C was shutdown on 11/18/97.

The float settings at RW-2A and RW-2B were raised approx. 13 ft. on 11/18/97. The float settings were lowered to approximately original depths on 11/9/98. System 001 was not operating (RW-1A and RW-1B not pumping) during collection of the May 19, 1998 water level measurements due to replacement of discharge line. System 001 was shutdown on October 30, 1998 on a temporary basis.

updated by SI.M 6/23/98, JAZ 11/17/98

>

SAMPLING SCHEDULE

Sample Location	Parameter	Method	Frequency	Months	Comments
SYSTEM 001 -VOC Plume					
Influent	VOCs	8260A	Not Sampled	Feb, May, Aug, Nov	System temp. shutdown Oct. 30, 1998
Effluent	Total Susp. Solids VOCs (1) Flow	160.2 8260A metered	Not Sampled Not Sampled 	Feb, May, Aug, Nov Feb, May, Aug, Nov	System temp. shutdown Oct. 30, 1998 System temp. shutdown Oct. 30, 1998 System temp. shutdown Oct. 30, 1998, Limit 12 gpm
Monitoring Wells (MW-G,6A,6B,A)	VOCs - MW-6A, MW-A VOCs - MW-G,6B	8260A 8260A	Qtrly Annually	Feb, May, Aug, Nov Feb*, May	Eliminated MW-2 - 1998
Recovery Wells (RW-1A, 1B)	VOCs	8260A	Qtrly	Feb, May, Aug, Nov	
SYSTEM 002 - PCP Plume					
Influent	ACID Compounds	8270	Qtrly	Feb, May, Aug, Nov	
Between GAC Units	ACID Compounds	8270	Monthly		
570		9370	0-1-	Eab May Are No.	
Ennent	PAIls (3)	8270 8310 metered	Quiy Quily 	Feb, May, Aug, Nov	Limit,12 gpm
Monitoring Wells	ACID Compounds- MW-3,H	8270	Qtrly	Feb, May, Aug, Nov	
(MW-3,4,H, D1,D2)	ACID Compounds- MW-4, D1, D2 PAHs - MW-3,H PAHs - MW-4, D1, D2	8270 8310 8310	Annually Qtrly Annually	May Feb, May, Aug, Nov May	Added MW-D1, D2 - 1998 Added MW-H - 1998
Recovery Wells (RW-2A,2B)	ACID Compounds	8270	Qtrly	Feb, May, Aug, Nov	Eliminated RW-2B 2/99

Notes:

(1) VOC compounds listed on the Discharge Monitoring Reports (DMRs) include 1,1 Dichloroethene, Trichloroethene, and 1,1,1 Trichloroethane. Eliminated Carbon Tetrachloride.

(2) Acid compounds listed on the Discharge Monitoring Reports (DMRs) include Pentachlorophenol and Phenol. Eliminated 2,4 Dichlorophenol and 2,4,6 Trichlorophenol.

(3) PAH compounds listed on the Discharge Monitoring Reports (DMRs) include Acenaphthylene and Naphthalene.

* Wells MW-G and MW-6B will also be sampled in February 1999.

Note - Recovery wells to be sampled by Praefke Brake personnel.

System 001 Influent and Effluent will not be sampled due to temporary shutdown of the system on Oct. 30, 1998.

CUMULATIVE CONTAMINANT REMOVAL GRAPHS (SYSTEM 001 AND 002)

Cumulative Contaminant Removal - System 001 Practike Brake - West Bend, WI





Cumulative Contaminant Removal - System 002

1105 Cont removal graphs - 002

1 of 1

CONTAMINANT CONCENTRATION VS. TIME GRAPHS -SYSTEM 001



1105gw voc.tbl - graphs mw's- TCE

Natural Resource Technology, Inc.



CONTAMINANT CONCENTRATION VS. TIME GRAPHS -SYSTEM 002





WDNR DISCHARGE MONITORING REPORT FORMS

PRAEFKE BRAKE & SUPPLY CORP.

133 Oak Street West Bend, Wisconsin 53095 (414) 334-2355 Fax No: (414) 334-2358



Discharge Monito Lab Name: Lab Cert#: DMR Sent to: 1	oring Report Form (Cont	laminaled Groundwaler) DNR File Refere Page 1	Permit No WI-0046 nce Number: 26700443 of 2	Mic 5566-3 Permittee Dan Prae 10 133 Wes	HAEL But Ike Brake Oak Street t Bend	₩I 53095
Outfall Number	001	001	001	001	001	001
Parameter Name	VOCs	1,1 Dichloroethylene	Trichloroelhene	1,1,1Trichloroelhane	TSS	flow
Parameter Units	ug/l	ug/l	ug/l	ug/l	ug/i	gal./day
Lab Method Used Date(s) Sampled						METERED
	NOT SAMPLED * System	NOT SAMPLED SHUT DOWN OC	NOT SAMPLED T. 30 , 1998 -	NOT SAMPLED MAY REQUIRE	NOT SAMPLED RE-START	O JAL /DAY
	PER MIKE	ZILLMER	WONR	/	· · · · · · · · · · · · · · · · · · ·	
Daily Max Limit					40	
Monthly Avg. Limit		0.7	40	50		:
Sample Type	Grab	Grab	Grab	Grab	Grab	Estimate
Sample Frequency	See Permit	See Permit	See Permit	See Permit	See Permit	continuous

Unless noted under parameter name, each daily value entered must be the highest value of all sample types analyzed for that day

Return Report no later Than: April 15 1999

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those Individuals immedially responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitted false information, including the possibility of fines and imprisonment, (40 CFR 122.5). I also certify that the values being submitted are the actual values found in the samples; no values have been modified or changed in any manner. Where ever I believe a value being reported is inaccurate, I have added an explaination indicating the reasons why the value is inaccurate.

Send Report To: Wastewater Section

Department of Natural Resources P.O. Box 12436 Milwaukee, WI 53212



Please attach notes and/or address-name corrections on a seperate sheet

Signature of Person Completing Form Signature of Principal Exec. Officer of Authorized Agent Title Q.C. mar

Discharge Monit Lab Name: Lab Cert#:/2 DMR Sent to: 1	oring Report Form (Co JET 8053530 Praefke	ontaminated Groundwa DNR Flle Re Page	ter) Permit No WI-0 ference Number: 26700 2 of 2	046566-3 Permittee 4 4430	MICHAEL BU Praefke Brake 133 Oak Street West Bend	WI 53095
Outfall Number	002	002	002	002	002	
Parameter Name	Pentachlorophenol	Phenol	Acenaphtylene	Naphthalene	Flow	
Parameter Units	ug/l	ug/l	ug/l	ug/l	gal/day	
Lab Method Used	8270	8270	83(0	8310	METERED	
2/9/99	L 3.2	41.7	< 0.59	< 0.24	2701 gal/OA	<u>, </u>
Daily Max Limit						· · ·
Monthly Avg. Limit	no delect	no detect	no delect	no detect		
Sample Type	Grab	Grab	Grab	Grab	estimate	
Sample Frequency	See Permit	See Permit	See Permit	See Permit	continuous	

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Signature of Person Completing Form	:
Signature of Principal Exec. Officer or Authorized Agent	Title
Machan Rel But	D.C. MGR

NO.571 P.2/4

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PRAEFKE BRAKE & SUPPLY CORP.

133 Oak Street West Bond, Wisconsin 53095 (414) 334-2355 Fax No: (414) 334-2358

JULY 1, 1999

Wastewater Section Dept. of Natural Resources P.O. Box 12346 Milwaukee, Wi 53212

RE: Permit No, WI-0046566-3 DNR File Ref. #267004430

Enclosed your will find our Discharge Report Forms for the second quarter of 1999.

Should you have any further questions, please feel free to contact us.

Very truly yours

PRAEFKE BRAKE & SUPPLY CORP.

Michael W. Butz Quality Control Manager



Discharge Monito Lab Name: Lab Cert#: DMR Sent to: F	oring Report Form (Co. 1ET 8053530 Praelke	ntaminated Groundwater) DNR File Refere Page 2) Permit No WI-0 ence Number: 267004 of 2	046566-3 Permitte 4430	MICHAEL e Præfke Brake 133 Oak Street West Bend	Butz	53095
Outfall Number	002	002	002	002	002		•
Parameter Name	Pentachlorophenol	Phenol	Acenaphtylene	Naphthalene	Flow .		
Parameter Units	ug/l	ug/l	ug/l	ug/l	gal/day		
Lab Method Used	8270	8270	8310	8310	METER	<u>eo</u>	
Date(s) Sampled 5 / 11 / 99	ل 3.2	2 1.7 -	< 0.55	< 0.22	2555 ga	L/ORY ·	•
Daily Max Limit	· · · · · · · · · · · · · · · · · · ·						
Monthly Avg. Limit	no detect	no detect	no detect	no detect			
Sample Type	Grab	Grab	Grab	Grab	estimate		
Sample Frequency	See Permit	See Permit	See Permit	See Permit	continuous		

Unless noted under parameter name, each daily value entered must be the highest value of all sample types analyzed for that day

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Please attach notes and/or address-name

corrections on a seperate sheet



NO.671 Signature of Person Completing Form σ Signature of Principal Exec. Officer or Authorized Agent Title . ω/4 D.C. MCR

Discharge Monito Lab Name: Lab Cert#: DMR Sent to: ^{\$}	Praefke	aminated Groundwater) DNR File Refere Page 1	Permit No WI-0046 nce Number: 26700443 of 2	Mic 5566-3 Permittee Prae 10 133 Wes	HAEL But fke Brake Oak Street t Bend	₩I 53095
Outfall Number	001	001	001	001	001	001
Parameter Name	VOCs	1,1 Dichloroethylene	Trichloroelhene	1,1,1Trichloroethane	TSS .	flow
Parameter Units	ug/i	ug/l	ug/l	ug/l	ug/l	gal./day
Lab Method Used Date(s)_Sampled						METERED
	* SYSTEM	SHUT DOWN OC	T. 30, 1998 -	MAY REQUIRE	RE-START	O GAL/DAY
	PER MIKE	ZILLMER	WONR	/		
Daily Max Limit			· · · · · · · · · · · · · · · · · · ·		40	
Monthly Avg. Limit		0.7	40	50		
Sample Type	Grab	Grab	Grab	Grab	Grab	Estimate
Sample Frequency	See Permit	See Permit	See Permit	See Permit	See Permit	continuous

Unless noted under parameter name, each daity value entered must be the highest value of all sample types analyzed for that day

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